

In re Appln. of Brian Christian Orr et al.
Serial No. 10/028,242
Reply To Office Action Of May 19, 2004

REMARKS

The above identified Final Office Action has been received, the references carefully considered, and the Examiner's comments carefully weighed. Additionally, applicant had a phone interview with the Examiner on August 18, 2004 with regard to the matters discussed herein. The amendments to the Claims below are made for clarification and are based on the application and drawings as originally filed. It is respectfully submitted that no new matter is added. As discussed below, it is contended that all bases of rejection set forth in both the Office Action have been traversed and overcome. Accordingly, reconsideration and withdrawal of the rejections is respectfully requested.

In the Final Office Action dated May 19, 2004, the Examiner rejected Claims 1-6 and 8-10 under 35 U.S.C. 103(a) as being unpatentable over Applicant Prior Art, Figure 2, in view of U.S. Patent No. 4,733,578 issued to Glaze et al. ("Glaze"). By this response, Applicants respectfully traverse these rejections. For the reasons stated herein, Applicants submit that each of the pending and non-withdrawn claims (Claims 1-6 and 8-10) are in condition for allowance.

With respect to the Examiner's rejection of Claims 1-6 and 8-10 under 35 U.S.C. 103 as being unpatentable over Applicant Prior Art, Figure 2, in view of Glaze, Applicants respectfully submit that neither the Applicant Prior Art, Figure 2, nor the Glaze reference teach, suggest, or infer to combine the relevant teachings of each. Applicant Prior Art, Fig. 2, is directed at a differential mechanism narrower in the rotational direction of the casing 12 in order to serve the purpose of removing the side gear shoulders as previously required in differential mechanisms. Similarly, the primary embodiment of Glaze is directed at a differential mechanism narrower in the rotational direction of the casing 80 in order to provide maximum spacing between the back surfaces of the side gears along the axis of rotation of the side gears (see Col. 4, lines 4-9). Glaze includes one sentence relating to making the differential wider in the direction of the casing without any teaching, suggestion or inference as to why such a

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modification is desirable. Because Applicant Prior Art, Fig. 2, specifically teaches away from having a wider differential mechanism in the rotational direction of the casing for the purpose of removing the side gear shoulders, Applicants respectfully submit the references are not combinable.

Even if combinable, the resulting modified differential does not include all features of Claims 1, 3-6, and 8-10. The Glaze reference discloses making a wider differential mechanism in the rotational direction of the casing by including varying radii from the centerpoint of the differential. Applicant Prior Art, Fig. 2, discloses moving the centerpoint of the spherical surface defined by the sidegears away from the centerpoint of the differential and in the exact opposite direction as provided for in the Claims in issue. Applicant Prior Art, Fig. 2, specifically teaches away from the invention as claimed by Applicants. If these references are combined, the resulting combination would disclose a differential that is wider in the rotational direction of the casing by including a long radius from a centerpoint of the spherical surface defined by the sidegears that is moved from the centerpoint of the differential in the exact opposite direction as provided for in Claims 1, 3-6 and 8-10. Thus, the combined modification does not include all of the features of Claims 1, 3-6 and 8-10.

Applicants respectfully disagree with Examiner's contention that "[t]he combination of Applicant Prior Art, Fig. 2, and Glaze, would have a chamber of the differential casing wider in the rotational direction of the casing, therefore all of the features of claims 1, 3-6 and 8-10 would be included," as stated on page 4 of the Final Office Action. Claims 1-6 and 8-10 do not require "a chamber of the differential casing wider in the rotational direction of the casing." All of these Claims include a limitation similar to "wherein a centerpoint of said at least one spherical surface is substantially collinear with said axle centerline and is offset from the centerpoint of said chamber by an offset distance along said axle centerline in a direction away from said opposing surface such that said at least one spherical surface is closer to said centerpoint of said at least one spherical surface than said

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chamber centerpoint," as provided for in Claim 1. Even if "[t]he combination of Applicant Prior Art, Fig. 2, and Glaze, would have "a chamber of the differential casing wider in the rotational direction of the casing" as asserted by Examiner, this combination would not include all of the features of the Claims in issue.

With respect to Claim 2, the Examiner indicates it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the ratio of the radius of one spherical surface to the offset distance be at 30. However, since neither Applicant Prior Art, Fig. 2 nor Glaze teach, suggest or infer the features of independent Claim 1 (i.e., "such that said at least one spherical surface is closer to said centerpoint of said at least one spherical surface than said chamber centerpoint.") from which Claim 2 depends, Applicants respectfully submit that selecting such a ratio would not have been obvious.

Finally, Applicants respectfully submit that Claims 1-6 and 8-10 are in a condition for allowance.

ENTRY OF AMENDMENT AFTER FINAL

It is respectfully submitted that the present amendment should be entered in accordance with the provisions of 37 C.F.R. Section 1.116 on the grounds that: (1) The claims as now presented are in better form for appeal purposes, if necessary; (2) no new issues have been raised; (3) and, moreover, the present amendment is believed to place the application in condition for allowance.

CONCLUSION

In light of the above remarks, it is respectfully submitted that applicant has responded in a fully satisfactory manner to all matters at issue in this Application, and that this Application is now in

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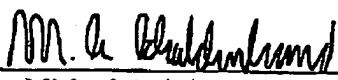
condition for allowance. In this regard, Applicants have made every effort to comply with the requirements set forth in the Final Office Action as well as the statutory requirements. Accordingly, Applicants respectfully request that the Examiner allow the Claims and pass the Application to issue. Prompt and favorable consideration of this response is respectfully requested.

Respectfully submitted,

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